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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,843	07/26/2000	Hiroki Hiyama	35.C14640	7974

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EXAMINER
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AGGARWAL, YOGESH K

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/625,843	<b>Applicant(s)</b> HIYAMA ET AL.	
	<b>Examiner</b> Yogesh K. Aggarwal	<b>Art Unit</b> 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*Response to Arguments*

1. Applicant's arguments filed 09/06/2005 have been fully considered but they are not persuasive.

**Examiner's response:**

2. Applicant argues with regards to claims 1-15 that it is not possible to combine the sensors of Hwang and Kinoshita because they are different and therefore it would be unobvious to combine the disclosures of those patents except as a result of hindsight after reading claims 1-15. The Examiner respectfully disagrees. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Kinoshita, the secondary reference, teaches applying a plurality of transfer pulses to a transfer switch in order for the charge transfer to be reliably carried out (col. 6 lines 32-36). Therefore Kinoshita explicitly teaches a motivation that by applying a plurality of transfer pulses, **the charge transfer is reliably carried out which results in no residual charges and thus no after-image effect.** Therefore in light of the teachings of Kinoshita, the primary reference Hwang is easily modified by applying a plurality of transfer pulses and the benefit of doing so would be so that **charge transfer is reliably carried resulting in no residual charges and thus no after-image effect.**

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3. Applicant argues with regards to claims 1-15 that pulses in Kinoshita are for a different purpose than those of applicant's claimed invention. The Examiner respectfully disagrees. MPEP 2144 states that the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972). Although *Ex parte Levengood*, 28 USPQ 2D 1300, 1302 (BPAI 1993) states that obviousness cannot be established by combining references "without also providing evidence of the motivating force which would impel one skilled in the art to do what the patent applicant has done", reading the quotation in context it is clear that while there must be motivation to make the claimed invention, there is no requirement that the prior art provide the same reason as the applicant to make the claimed invention. Therefore Kinoshita's motivation for having plurality of pulses being applied to the transfer switch **so that charge transfer is reliably carried out which results in no residual charges and thus no after-image effect** is found to be sufficient.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 6,791,612 to Hwang) in view of (USPN 4,870,495 to Kinoshita et al.).

In regards to claim 1 Hwang discloses an image pickup device comprising:

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pixels each including a photoelectric conversion unit (e.g., element 101 of Fig. 2) and a transfer switch for transferring photoelectric conversion charges generated by the photoelectric conversion unit (e.g., element MT of Fig. 2) to a charge accumulation unit for accumulating said photoelectric conversion charges (e.g., element D of Fig. 2); and

driving means for applying a pulse to the transfer switch to transfer said charges generated by the photoelectric conversion unit via the transfer switch (e.g., Fig. 3).

Hwang does not disclose nor preclude applying a plurality of transfer pulses to the transfer switch. Kinoshita discloses to apply a plurality of transfer pulses to a transfer switch so that the charge transfer can be reliably carried out (e.g., column 6, lines 32-36). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply a plurality of transfer pulses to Hwang's transfer switch in order for the charge transfer to be reliably carried out.

In regards to claim 2 Hwang discloses said pixel includes amplifying means for amplifying and outputting a photoelectric conversion signal corresponding to the charges transferred via the transfer switch (e.g., elements MD, MS and MB form a source follower amplifier).

In regards to claim 3 see Fig. 3 and column 2, lines 1-16 of Hwang.

In regards to claim 4 see column 2, lines 1-16 of Hwang.

In regards to claims 5 and 6 see Examiners notes on the rejections above. Also note Fig. 1 of Hwang.

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In regards to claim 7 note that at least the A/D conversion operation is a circuit for processing a signal from said pixel. Examiner notes that a lens for focusing light onto said photoelectric conversion unit is implicit to Hwang's device.

In regards to claims 8-15 see Examiners notes on the rejections above.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA

November 22, 2005

A handwritten signature in black ink, appearing to read 'David Ometz', with a long horizontal flourish extending to the right.

DAVID OMETZ  
SUPERVISORY PATENT EXAMINER